

ABSTRACT OF THE DISCLOSURE

A cooling exchanger comprised of a cooling base plate, two units of water pans and two units of water pumps. Within, Said cooling base plate include two units of contact plats incorporated with multiple units of SbBi crystals and bridged with a conductor. Outer edges between said two contact plates are coated with insulation resin to close and separate a shortage. A DC source is connected to said two units of SbBi crystal containing opposite polarities connected and a relative temperature difference ( $\Delta T$ ) takes place at where both contact plates connected to the crystals. Said two units of water pan are locked in position on two contact plates of the cooling base plate. A water inlet and a water outlet provided on the front of each eater pan are respectively connected to form a close pipeline for the water controlled by a water pump to circulate inside the pipeline. The water from the pipeline flows into said two water pans to complete heat exchange for being subject to the temperature difference ( $\Delta T$ ) to reduce the temperature of the circulating water for achieving the purpose of lowering the room temperature.